CLAIMS

1. A method for producing a retardation film, which comprises the steps of mixing mutually compatible polymers A and B which satisfy the following conditions (1) and (2), and of forming the resulting mixture into a film, wherein the mixing ratio is adjusted so that the film has desired wavelength dispersion characteristics of retardation :

(1) the polymer A is a copolymer comprising repeating units a and b, and

(2) the polymer B is a copolymer comprising the repeating units a and b and is different from the polymer A in copolymerization composition.

2. The method for producing the retardation film according to claim 1, wherein the difference, between R(450)/R(550) of the polymer A and R(450)/R(550) of the polymer B, is 0.1 or above in the case that each of the polymers A and B is solely formed into a retardation film, respectively, [wherein R(450) and R(550) are each the retardation in the film plane of the retardation film measured at measuring wavelengths of 450 nm and 550 nm and R(450)/R(550) is their ratio].

3. The method for producing the retardation film according to claim 1, wherein the following formula (1) is satisfied in the case that the polymer A is solely formed into the retardation film

$$R(450)/R(550) < 1 \qquad (1)$$

[wherein the definitions of R(450) and R(550) are the same as described above].

4. The method for producing the retardation film according to claim 3, wherein the following formula (2) is satisfied in the case that the polymer B is solely formed into the retardation film

$$R(450)/R(550) \geqq 1 \qquad (2)$$

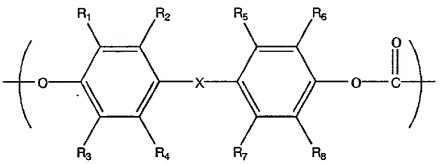
[wherein the definitions of R(450) and R(550) are the same as described above].

5. The method for producing the retardation film according to claim 1, wherein the repeating unit a contains a bisphenol component having a fluorene ring.

6. The method for producing the retardation film according to claim 1, wherein the polymers A and B are aromatic polyester polymers.

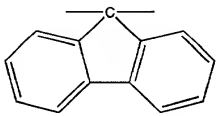
7. The method for producing the retardation film according to claim 6, wherein the aromatic polyester polymers are polycarbonates.

8. The method for producing the retardation film according to claim 7, wherein the polymers A and B are the polycarbonate copolymers in which a repeating unit a represented by the following formula (I) accounts 5 to 95 mole% :



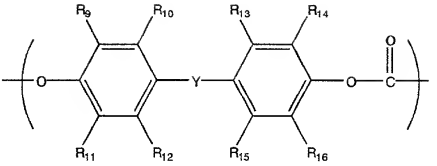
(I)

[wherein R_1 to R_8 are each independently at least one kind selected from a hydrogen atom, halogen atoms and hydrocarbon groups of 1 to 6 carbon atoms; and X is represented by the following formula ;]



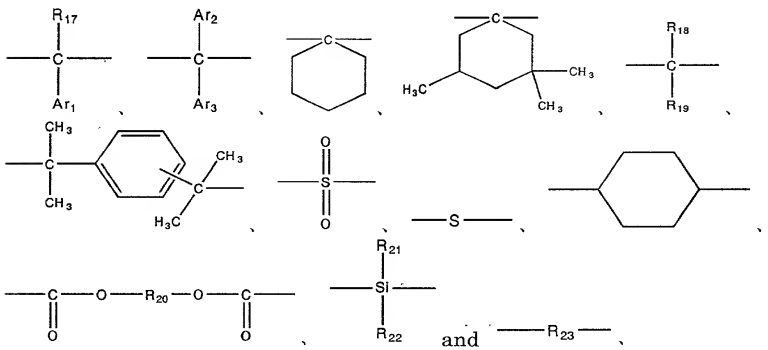
and

a repeating unit b represented by the following formula (II) accounts for 95 to 5 mole% of the whole :



(II)

{wherein R_9 to R_{16} are each independently at least one kind selected from a hydrogen atom, halogen atoms and hydrocarbon groups of 1 to 22 carbon atoms and Y is at least one kind of group selected from the group of the following formulae ;



and

[wherein R_{17} to R_{19}, R_{21} and R_{22} are each independently at least one kind of group selected from a hydrogen atom, halogen atoms and hydrocarbon groups of 1 to 22 carbon atoms; R_{20} and R_{23} are each independently at least one kind of group selected from hydrocarbon groups of 1 to 20 carbon atoms; and Ar_1 to Ar_3 are each independently an aryl group of 6 to 10 carbon atoms in the above formula (II)]}.

9. The method for producing the retardation film according to claim 1,

wherein both the polymers A and B have positive optical anisotropies or negative optical anisotropies in the case that each of the polymers A and B is solely formed into the retardation film, respectively.

10. The method for producing the retardation film according to claim 1, wherein the mixing ratio of the polymers A and B is determined so that the ratio of the repeating unit a is 50 to 99 mole% based on the total amount of the repeating units a and b contained in the mixture.

11. The method for producing the retardation film according to claim 1, which comprises a step of dissolving the polymers A and B in an organic solvent and producing a solution composition, a step of casting the solution composition onto a support, and a step of drying the cast solution composition containing the organic solvent.

12. The method for producing the retardation film comprising the steps of mixing mutually compatible polymers A and B which satisfy the following conditions (1) to (4), and of forming the resulting mixture into a film, wherein the mixing ratio of is adjusted so that the film has desired wavelength dispersion characteristics of retardation :

(1) the polymer A is a polycarbonate copolymer comprising repeating units a and b,

(2) the polymer B is a polycarbonate comprising the repeating units a and b and is different from the polymer A in copolymerization composition,

(3) the polymers A and B have a difference between a ratio of R(450)/R(550) of polymer A and the ratio of the polymer B of 0.1 or above in the case that each of the polymers A and B is solely formed into the retardation film, respectively, [wherein R(450) and R(550) are each the retardation in the film plane of the retardation film measured at measuring wavelengths of 450 nm and 550 nm] and

(4) the mixing ratio of the polymers A and B is determined so that the ratio of the repeating unit a is 50 to 99 mole% based on the total amount of the repeating units a and b contained in the mixture.

13. The method for producing the retardation film, which comprises the steps of mixing two mutually compatible polymers A and B which satisfy the following conditions (1) to (4), and of forming the resulting mixture into a film, wherein the mixing ratio is adjusted so that the film has desired wavelength dispersion characteristics of retardation :

(1) the polymer A is a polycarbonate copolymer comprising repeating units a and b,

(2) the polymer B is a polycarbonate copolymer comprising the repeating units a and b and is different from the polymer A in copolymerization composition,

(3) the repeating unit a comprises a bisphenol component having a fluorene ring, and

(4) the mixing ratio of the polymers A and B is determined so that the ratio of the repeating unit a is 50 to 99 mole% based on the total amount of the repeating units a and b contained in the mixture.

14. The retardation film comprising a composition prepared by mixing mutually compatible polymers A and B which satisfy the following conditions (1) and (2) :

(1) the polymer A is a copolymer comprising repeating units a and b and

(2) the polymer B is a copolymer comprising the repeating units a and b and is different from the polymer A in copolymerization composition.

15. The retardation film according to claim 14, wherein the polymers A and B are aromatic polyester polymers.

16. The retardation film according to claim 14, wherein the mixing ratio of the polymers A and B is determined so that the ratio of the repeating unit a is 50 to 99 mole% based on the total amount of the repeating units a and b contained in the composition.

17. The retardation film according to claim 14, wherein the retardation film satisfies the following formula (1) :

$$R(450)/R(550) < 1 \qquad (1)$$

[wherein the definitions of R(450) and R(550) are the same as described above].